

CHAPTER 4

POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE EAST FORK CLARK'S RIVER WATERSHED

4.1 Background.

4.2. Characterization of HUC-10 Subwatersheds

4.2.A. 0604000601 (East Fork Clark's River)

4.1. BACKGROUND. This chapter is organized by HUC-10 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. Description of point source contributions
- ii.a. Description of facilities discharging to water bodies listed on the 2002 303(d) list
- iii. Description of nonpoint source contributions

There is one HUC 10-digit subwatershed in the Tennessee portion of the East Fork Clark's River Watershed (HUC 06040006).

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 2.0 (developed by Tetra Tech, Inc for EPA Region 4) released in 2003.

WCS integrates with ArcView® v3.x and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.

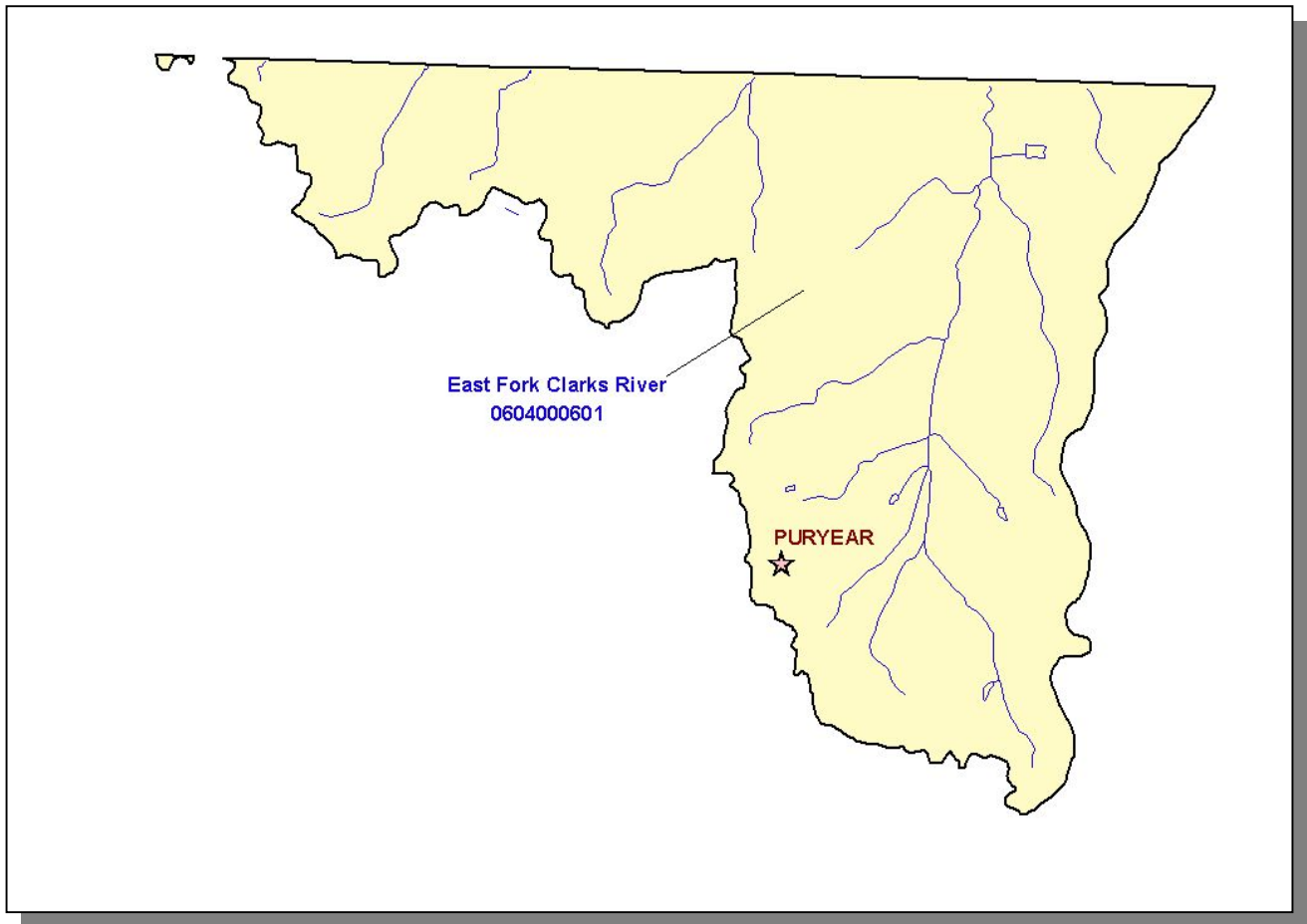


Figure 4-1. The Tennessee Portion of the East Fork Clark's River Watershed is Composed of one USGS-Delineated Subwatershed (10-Digit Subwatersheds). Location of Puryear is shown for reference.

4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS. The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize the Tennessee portion of the East Fork Clark's River Watershed.

HUC-10	HUC-12
0604000601	060400060101 (East Fork Clark's River)

Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages. NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

4.2.A. 0604000601 (East Fork Clark's River).

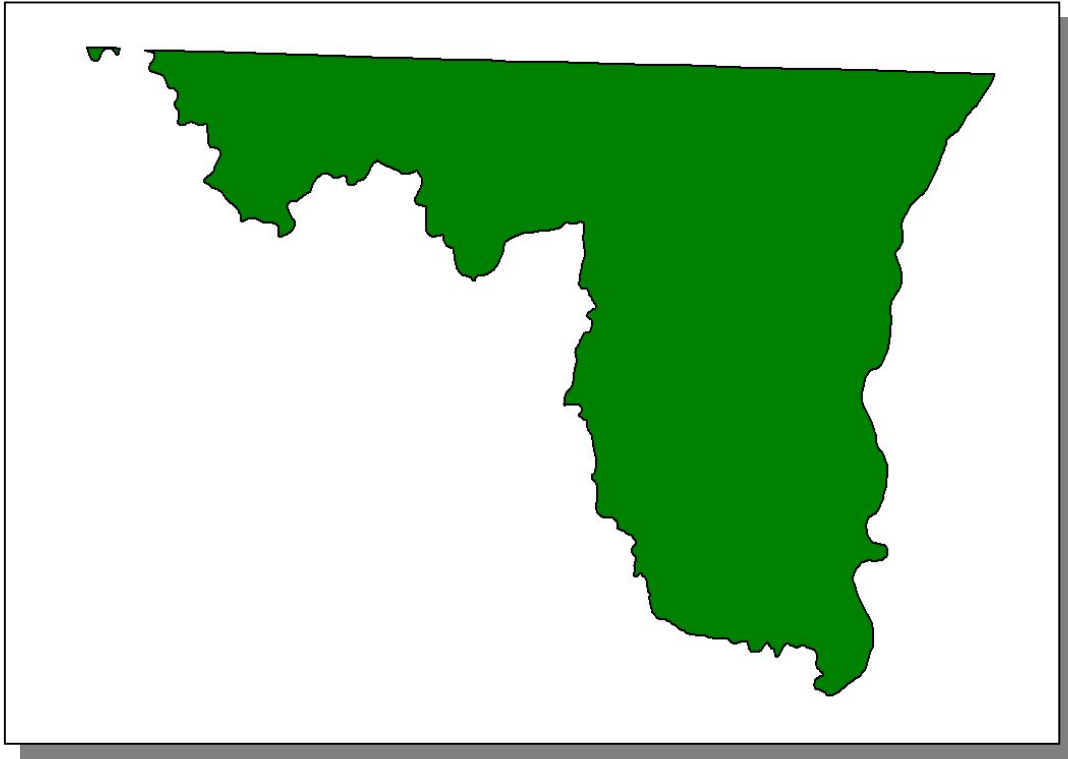


Figure 4-2. Location of Subwatershed 0604000601. The Tennessee portion of East Fork Clark's River Watershed is composed of one HUC-10 subwatershed.

4.2.A.i. General Description.

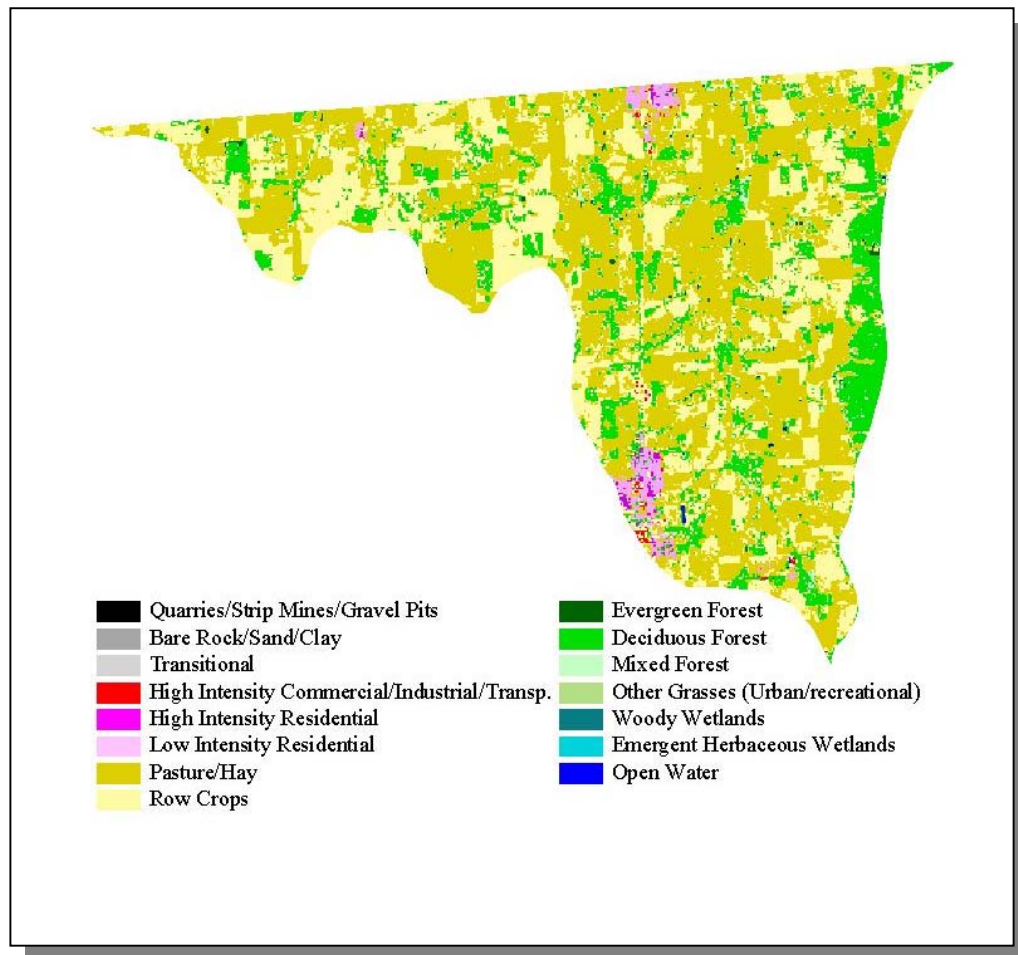


Figure 4-3. Illustration of Land Use Distribution in Subwatershed 0604000601.

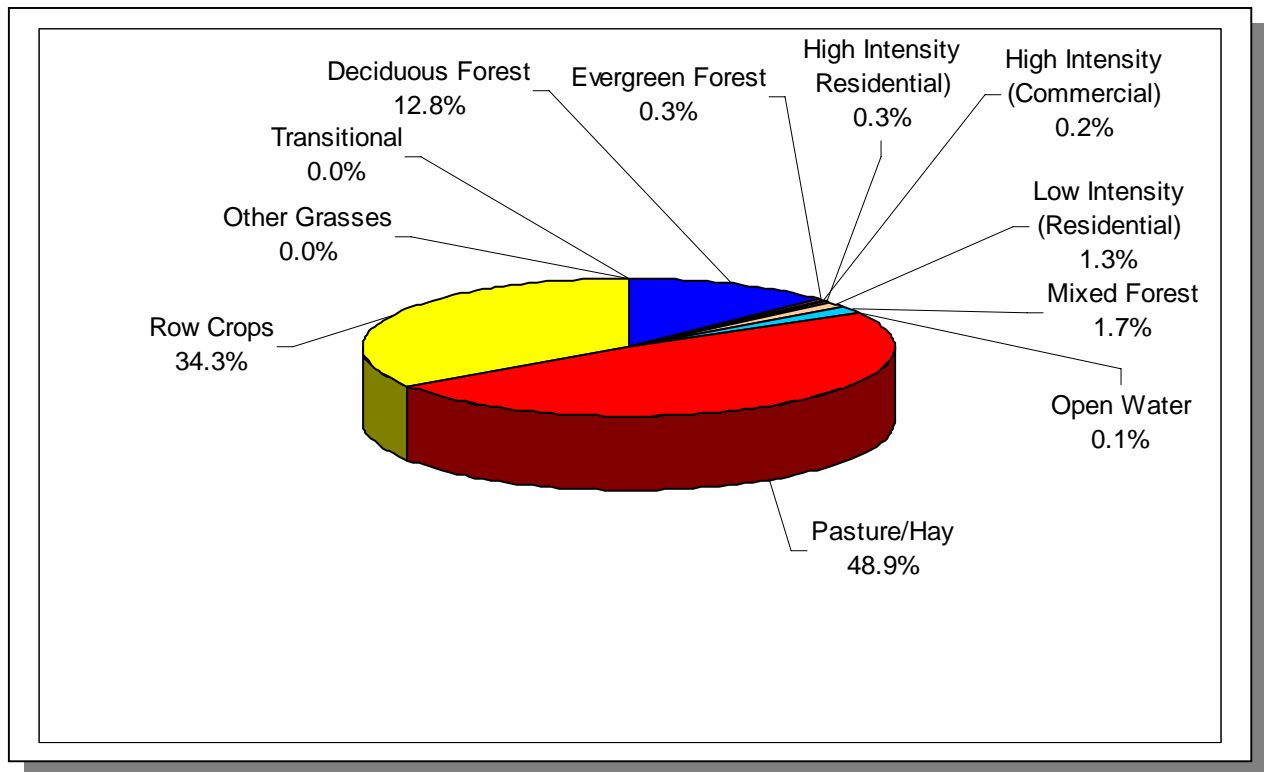


Figure 4-4. Land Use Distribution in Subwatershed 0604000601. More information is provided in Appendix IV.

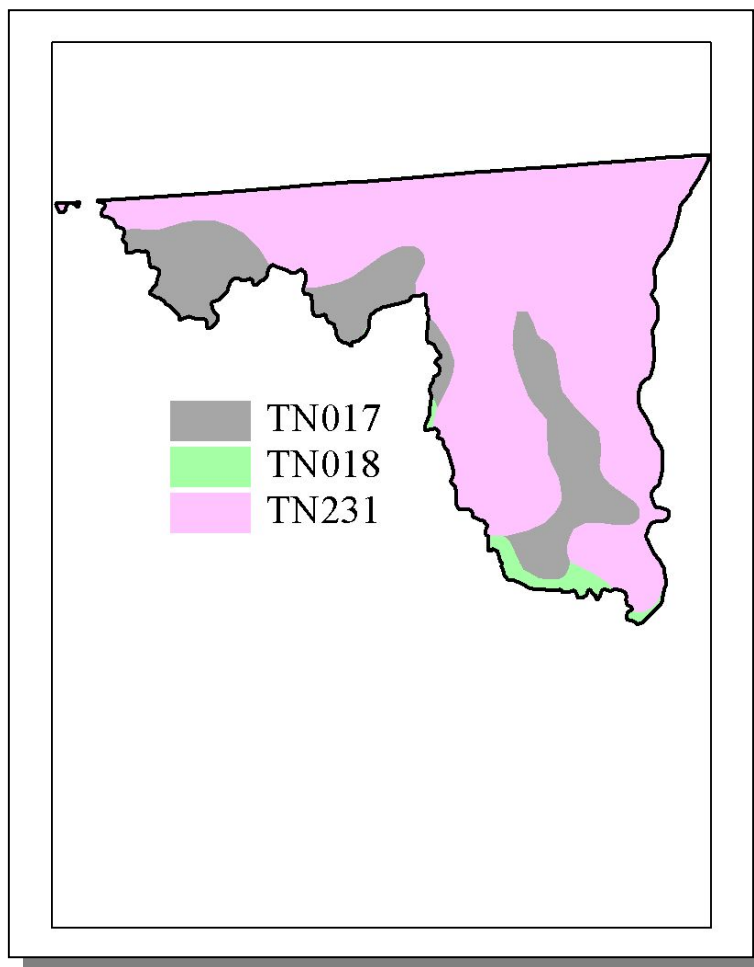


Figure 4-5. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000601.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN017	0.00	B	1.81	5.26	Silty Loam	0.45
TN018	8.00	B	2.62	5.10	Loam	0.38
TN231	16.00	C	1.30	5.21	Silty Loam	0.48

Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000601. More details are provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-1997)
	1990	1997	2000		1990	1997	2000	
Henry	27,888	29,830	31,115	3.31	922	987	1,029	11.6

Table 4-3. Population Estimates in Subwatershed 0604000601.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Puryear	Henry	602	285	285	0	0

Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0604000601.

4.2.A.ii Point Source Contributions.

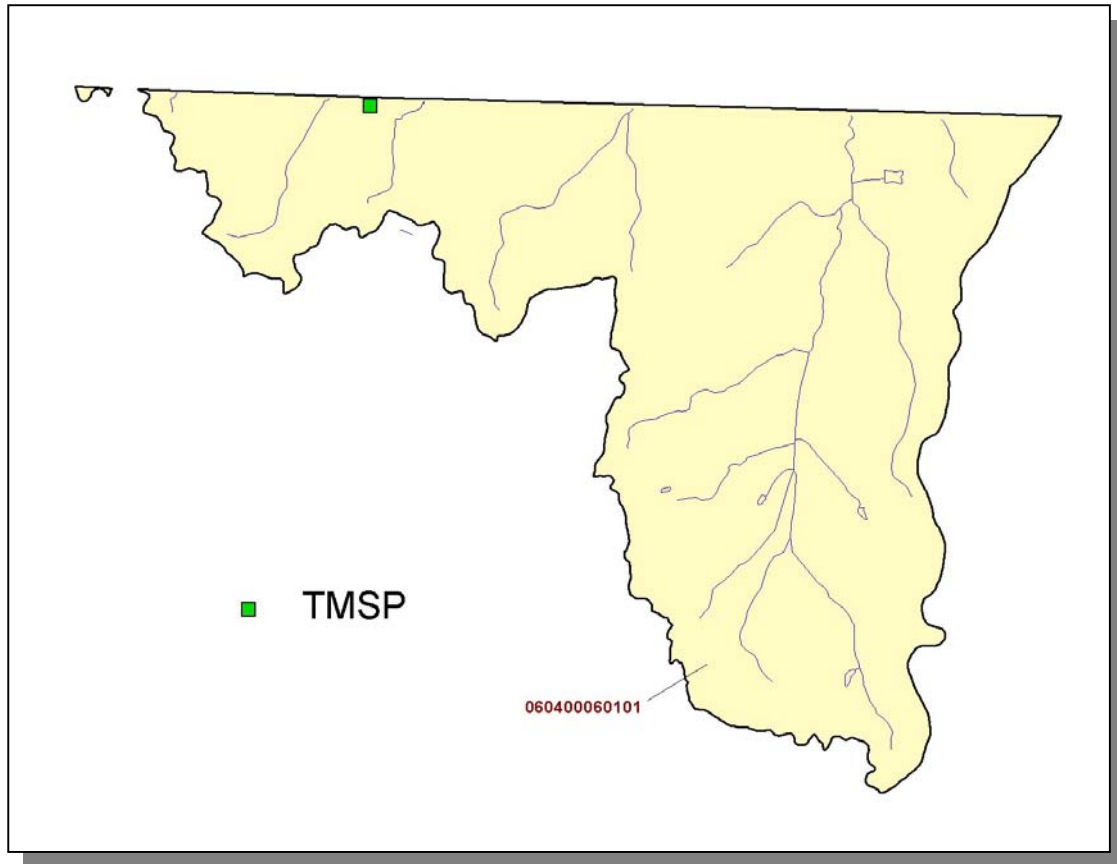


Figure 4-6. Location of Active Point Source Facilities in Subwatershed 0604000601. 060400060101 is the only HUC-12 subwatershed. More information, including the names of facilities, is provided in Appendix IV.



Figure 4-7. Location of TMSP Facilities in Subwatershed 060400060101. 060400060101 is the only HUC-12 subwatershed. More information, including the names of facilities, is provided in Appendix IV.

4.2.A.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens Sold	Hogs	Sheep
1,410	3,346	296	5	<5	5,967	15

Table 4-5. Summary of Livestock Count Estimates in Subwatershed 0604000601. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Henry	176.1	176.1	1.9	7.1

Table 4-6. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0604000601.

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.25
Grass (Hayland)	0.25
Legumes, Grass (Hayland)	0.11
Grass, Forbs, Legumes (Mixed Pasture)	0.52
Forest Land (Not Grazed)	0.00
Forest Land (Grazed)	0.00
Corn (Row Crops)	7.72
Soybeans (Row Crops)	6.38
Wheat (Close-Grown Cropland)	6.02
Other (Horticultural)	16.41
Other Cropland not Planted	2.61
Conservation Reserve Program Lands	0.57
Non-Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.10

Table 4-7. Annual Estimated Total Soil Loss in Subwatershed 0604000601.